61072

Patent and Trademark Office

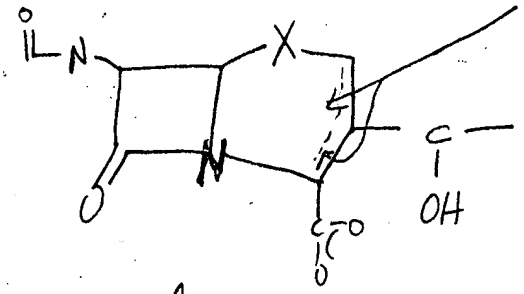
SEARCH REQUEST FORM

Requestor's Name: BERCH Serial Number: 09/918152

Date: 2/26/02 Phone: 4718 (4D15 4E12) Art Unit: 1624

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).



Point of Contact:
Susan Hanley
Technical Info. Specialist
CM1 12C14 Tel: 305-4053

J = $(C(A)(A'))_n$—OH or $(C(A)(A'))_j$—C≡C

n = 2-5 j = 1-3

A, A' = H/CH3

X = S/C/O

MARY

L1

STAFF USE ONLY

Date completed: 2/28 3/7
Searcher: Hanley
Terminal time:
Elapsed time:
CPU time:
Total time:
Number of Searches:
Number of Databases:

Search Site	Vendors
STIC	IG Suite
CM-1	STN
Pre-S	Dialog
Type of Search	APS
N.A. Sequence	Geninfo
A.A. Sequence	SDC
Structure	DARC/Questel
Bibliographic	Other

```
=> d his

     (FILE 'HOME' ENTERED AT 16:12:58 ON 07 MAR 2002)

     FILE 'HCAPLUS' ENTERED AT 16:13:17 ON 07 MAR 2002
L1           242 S BEST D?/AU
L2           578 S BURTON G?/AU
L3            20 S GASSON B?/AU
L4          1808 S WALKER G?/AU
L5             1 S L1 AND L2 AND L3 AND L4
                 SELECT RN L5 1

     FILE 'REGISTRY' ENTERED AT 16:15:28 ON 07 MAR 2002
L6            20 S E1-20

     FILE 'HCAPLUS' ENTERED AT 16:15:52 ON 07 MAR 2002
L7             1 S L5 AND L6

     FILE 'REGISTRY' ENTERED AT 16:16:39 ON 07 MAR 2002
L8                 STR
L9               0 S L8
L10                SCREEN 1839 AND 1993 AND 2008
L11              0 S L8 AND L10
L12              7 S L8 AND L10 FUL
                 SAVE L12 BER152P/A

     FILE 'HCAPLUS' ENTERED AT 16:29:17 ON 07 MAR 2002
L13              2 S L12
L14              1 S L13 NOT L7

     FILE 'CAOLD' ENTERED AT 16:30:15 ON 07 MAR 2002
L15              0 S L12

     FILE 'BEILSTEIN' ENTERED AT 16:30:34 ON 07 MAR 2002
L16              1 S L8 FUL
L17              0 S L12
L18              1 S L16 AND PRE/FA
P066120K         PRINT  OFFLINE QRD
```

inventor search

1 citation with 20 compounds displayed

7 compounds from full file search

2 cites for L12 cpds

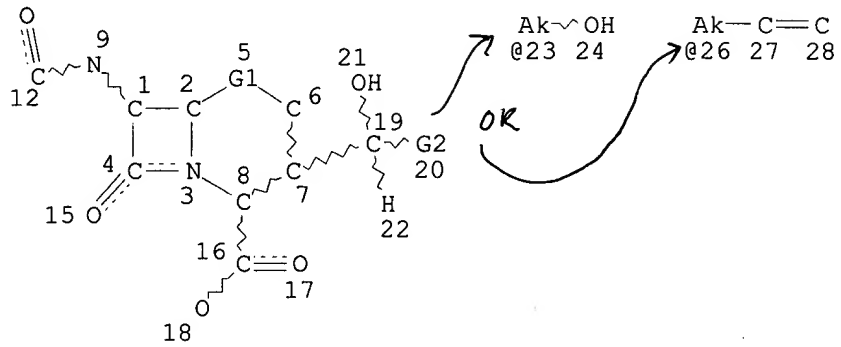
1 cite that is not appl. work

no cites

1 compound

=> d que l13

L8 [redacted] STR



VAR G1=S/C/O
VAR G2=23/26
NODE ATTRIBUTES:
CONNECT IS E2 RC AT 23
CONNECT IS E2 RC AT 26
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 23
GGCAT IS SAT AT 26
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE
L10 SCR 1839 AND 1993 AND 2008
L12 7 SEA FILE=REGISTRY SSS FUL L8 AND L10
L13 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

inventor search

BERCH 09/918,152

=> d ibib abs hitstr

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:104661 HCAPLUS
DOCUMENT NUMBER: 136:151036
TITLE: Process for the preparation of cephalosporin compounds and their intermediates
INVENTOR(S): **Burton, George; Best, Desmond John ; Gasson, Brian Charles**; Osborne, Neal Frederick; **Walker, Graham**
PATENT ASSIGNEE(S): Pfizer Inc., USA
SOURCE: Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1178049	A1	20020206	EP 2001-306325	20010723

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: GB 2000-19124 A 20000803
GI

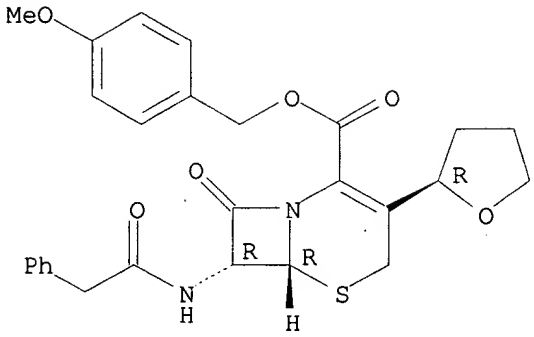
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A process for prepg. cephalosporins I (R1 = H, OMe, formamido; R2 = acyl; CO2R3 = carboxy group or CO2- or readily removable carboxy protecting group; R4 = H, or up to four substituents from alkyl, alkenyl, alkynyl, alkoxy, halogen, amino, alkyl(acyl)amino, CO2R, CONR2, SO2NR2 (R = H, C1-6 alkyl), aryl, heterocycle, etc.; X = S, SO, SO2, O, CH2; m = 1-2; dotted lines indicate a 2- or 3-cephem system) was accomplished via the cyclization of II. Thus the 3-(R and S)-tetrahydrofuran-2-yl-2-em compds. III were prepd. and the S isomer was converted to the 3-(S)-tetrahydrofuran-2-yl-3-em III in several steps.

IT **141194-60-7P 395660-97-6P 395660-99-8P**
395661-00-4P 395661-04-8P 395661-06-0P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for prepg. cephalosporin compds. and their intermediates)

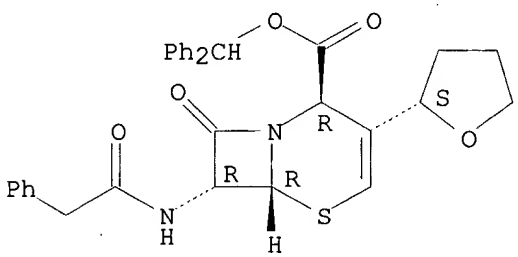
RN 141194-60-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-7-[(phenylacetyl)amino]-3-[(2R)-tetrahydro-2-furanyl]-, (4-methoxyphenyl)methyl ester, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



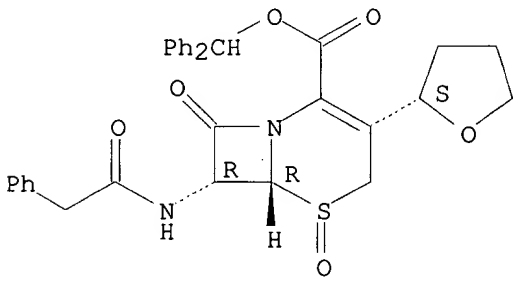
RN 395660-97-6 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



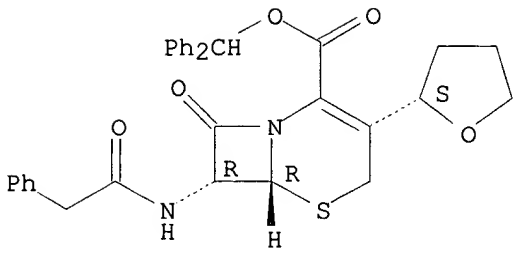
RN 395660-99-8 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



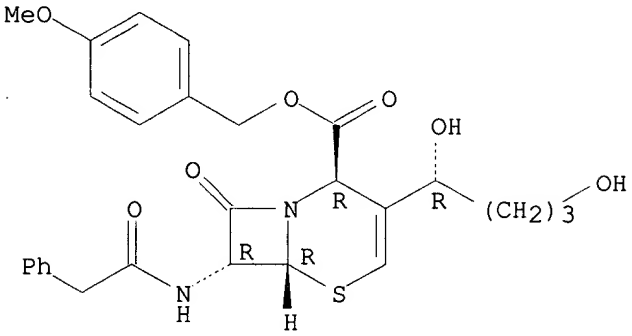
RN 395661-00-4 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



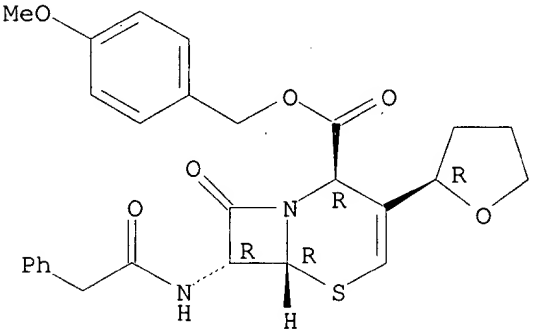
RN 395661-04-8 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



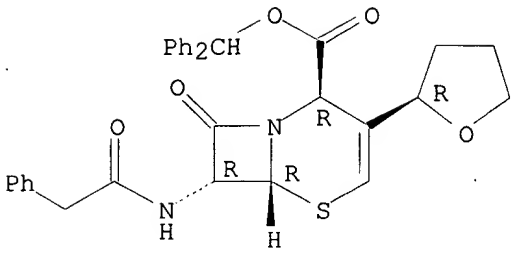
RN 395661-06-0 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



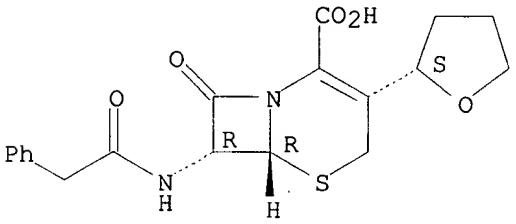
IT **395660-98-7P 395661-01-5P 395661-05-9P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for prepg. cephalosporin compds. and their intermediates)
RN 395660-98-7 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



RN 395661-01-5 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

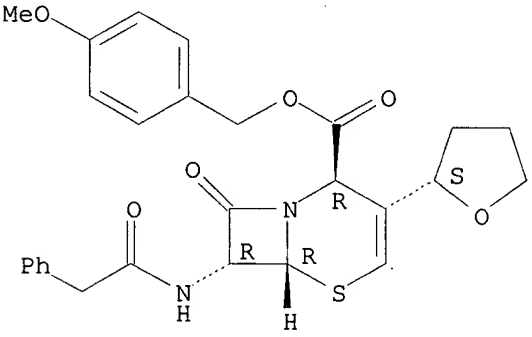
Absolute stereochemistry.



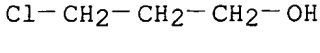
● Na

RN 395661-05-9 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



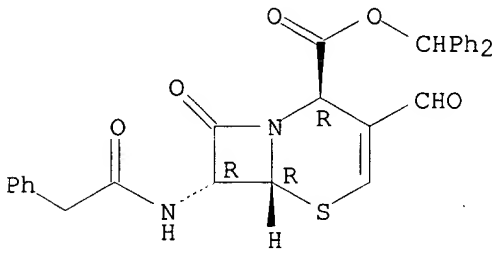
IT **627-30-5**, 3-Chloropropan-1-ol **2622-05-1**, Allylmagnesium chloride **39914-26-6 72824-04-5**, 2-Allyl-4,4,5,5-tetramethyl-1,3,2-dioxaborolane **171229-07-5**, Dimethyl (R,R)-2-allyl-1,3,2-dioxaborolane-4,5-dicarboxylate **395661-02-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for prepg. cephalosporin compds. and their intermediates)
RN 627-30-5 HCAPLUS
CN 1-Propanol, 3-chloro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



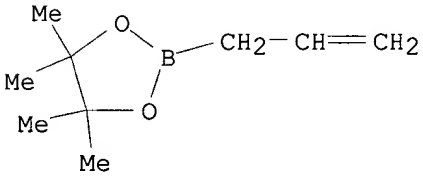
RN 2622-05-1 HCAPLUS
CN Magnesium, chloro-2-propenyl- (9CI) (CA INDEX NAME)

RN 39914-26-6 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-3-ene-2-carboxylic acid, 3-formyl-8-oxo-7-[(phenylacetyl)amino]-, diphenylmethyl ester, (2R,6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

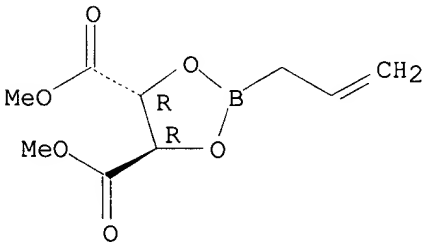


RN 72824-04-5 HCAPLUS
CN 1,3,2-Dioxaborolane, 4,4,5,5-tetramethyl-2-(2-propenyl)- (9CI) (CA INDEX NAME)



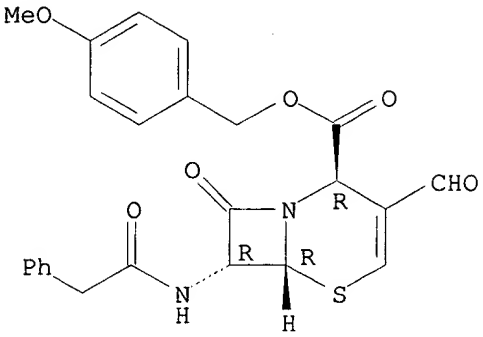
RN 171229-07-5 HCAPLUS
CN 1,3,2-Dioxaborolane-4,5-dicarboxylic acid, 2-(2-propenyl)-, dimethyl ester, (4R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



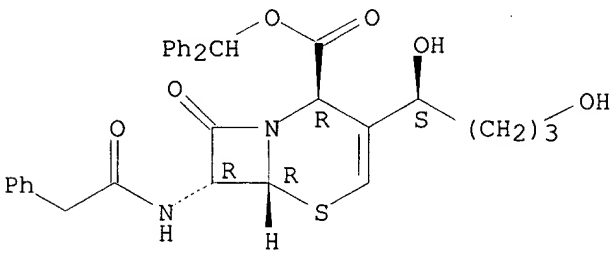
RN 395661-02-6 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



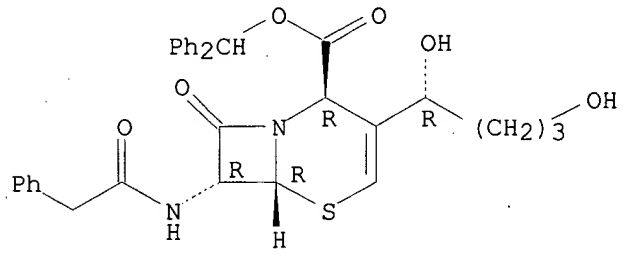
IT **395660-95-4P 395660-96-5P 395661-03-7P**
395661-07-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for prepg. cephalosporin compds. and their intermediates)
RN 395660-95-4 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



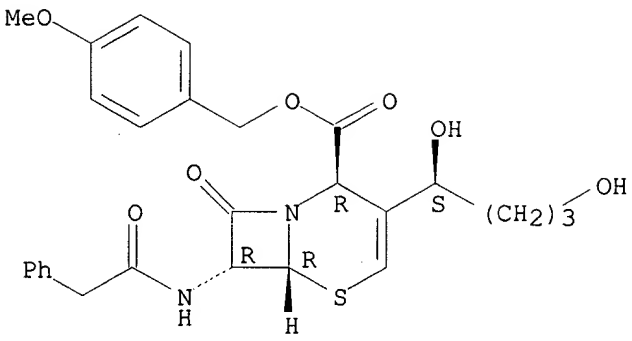
RN 395660-96-5 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



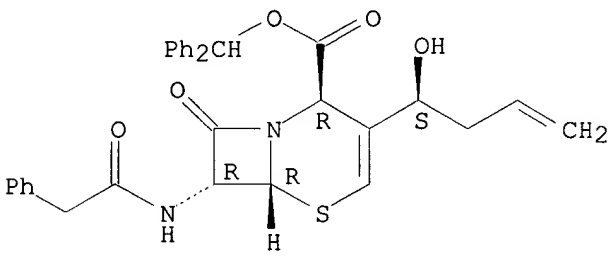
RN 395661-03-7 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



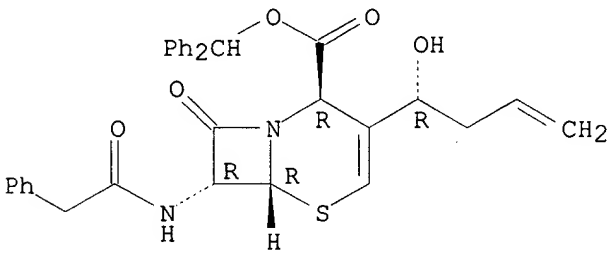
RN 395661-07-1 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



IT **395661-08-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(process for prepg. cephalosporin compds. and their intermediates)
RN 395661-08-2 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

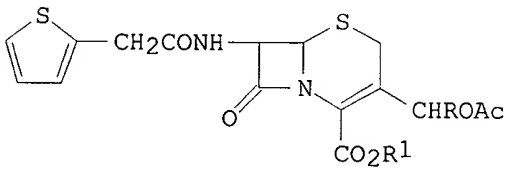
Absolute stereochemistry.



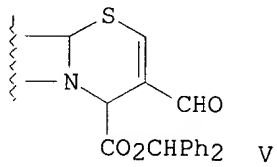
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr

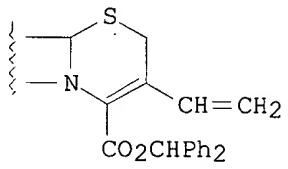
L14 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1981:407185 HCAPLUS
DOCUMENT NUMBER: 95:7185
TITLE: Some novel C(3)-substituted cephalothin derivatives
AUTHOR(S): Valcavi, Umberto; Brandt, Alberto; Corsi, G. Bruno; Minoja, Fabrizio; Pascucci, Giorgio
CORPORATE SOURCE: Ist. Chim. Org., Univ. Milano, Milan, 20100, Italy
SOURCE: Gazz. Chim. Ital. (1980), 110(9-10), 519-22
CODEN: GCITA9; ISSN: 0016-5603
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



V



VI

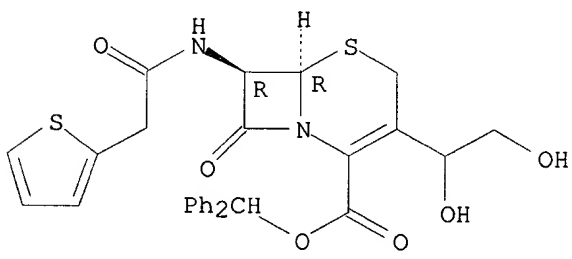
AB Cephalothin derivs. I [R, R1 = CH2OAc, H; CH:CH2, CHPh2 (II); C.tplbond.CH, CH2OMe (III); C.tplbond.CMe, CHPh2 (IV), etc.] were prepd. from V or VI. It was impossible to obtain II, III, and IV as free acids owing to a very fast acetate group displacement.

IT **77725-26-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with acetyl chloride)

RN 77725-26-9 HCAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-(1,2-dihydroxyethyl)-8-oxo-7-[(2-thienylacetyl)amino]-, diphenylmethyl ester, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d all

L18 ANSWER 1 OF 1 COPYRIGHT 2002 BEILSTEIN CDS MDLI

Beilstein Reg. No. (BRN): 6552397 Beilstein
Molecular Formula (MF): C28 H26 N2 O6 S2
Autonom Name (AUN): 3-(1,2-dihydroxy-ethyl)-8-oxo-7-(2-thiophen-2-yl-acetylamino)-5-thia-1-aza-bicyclo<4.2.0>oct-2-ene-2-carboxylic acid benzhydryl ester
Beilstein Reference (SO): 6-27
General Comments (NTE): Stereo compound
Formula Weight (FW): 550.64
Lawson Number (LN): 31715; 19524; 5520

Ring System Data:

Number of Rings (CNR): 5
Ring Systems (CNRS): 4
Diff. Ring Systems (CNDRS): 3
Ring Heteros (CNRH): 3
Acyclic Heteros (CNAH): 7

Beilstein Ring Index (BRIX)	Ring System Formula (RF)	BRIX Count
8.2.4-2.26-1.2	C6NS	1
6.1.0-0.0-3.1	C6	2
5.1.0-1.3-2.2	C4S	1

I will deliver this to you as soon as I receive it from Beilstein

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Preparation:
PRE
Start: BRN=6550775 benzhydryl 7-(2-thienylacetamido)-3-vinyl-3-cephem-4-carboxylate
Reag: OsO4, KClO3
Solv: tetrahydrofuran, H2O
Reference(s):
1. Valcavi, Umberto; Brandt, Alberto; Corsi, G. Bruno; Minoja, Fabrizio; Pascucci, Giorgio, Gazz.Chim.Ital., 110 <1980> 9/10, 519-522, LA: EN, CODEN: GCITA9
Note(s):
2. Yield given